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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,820	06/23/2003	Martin Bentham	2197.016USX	9080

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EXAMINER	
EINSMANN, MARGARET V	
ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/601,820	BENTHAM, MARTIN	
	Examiner	Art Unit	
	Margaret Einsmann	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *20 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to the amendment filed 6/20/05. The pending claims are 1-30.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-23 , 26, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over of Brewin et al., US 2,990,087 or Kronsbein et al., US 2,985,502 in view of Hester et al. US 5,458,265.

In the process of Brewin's invention textile materials, especially hosiery, are placed over forms to maintain the desired shape. This is equivalent to applicant's first process step in claim 1, "removing folds from the fabric" as well as applicant's first process step in claim 12 and it also meets the limitations of claims 13-15. See col 4 line 24 et seq. The dye mixture of water base, dyestuff, resin, surface active agent and lubricant is sprayed by rotating the spray and jetting the spray through the jet nozzles. See col 4 lines 5-23. This meets the limitation of claim 16. The atmosphere in the dyeing chamber is superatmospheric pressure which provides for the migration and fixation of the dye. Though no steam is added to dilute the solution, the superatmospheric pressure at the boiling point is a steam fixation step. The dyeing,

scouring, finishing, lubricating and setting occurs in from 1-30 minutes, preferably 4 or 5 minutes. Then the textile material is dried. See entire column 4.

Regarding the limitation of claims 2, 3, 4,5, 17-20 nylon is a polyamide which has a reactive amine site. Patentee also teaches that other natural and synthetic fibers or mixtures thereof may be treated by this invention. See col 3 lines 45-56. Regarding the limitation of claims 6, 7 and 21. Note the examples in columns 7-8, Table-part I. Acid dyes on wool, silk and nylon are used. These are water soluble dyes. As is known to the dye chemist, ionic bonds form from these dyeing processes wherein the amine site reacts with the acid functionality on the dye. Note that disperse dyes are used on several examples (6,7,18,19). These dyeing processes produce a disbursement into the fiber molecule.

Kronsbein et al., US 2,985,502. teaches an alternative process of dyeing synthetic textile garments. Noting figures 1 and 2 and the description in column 2, nylon stockings are mounted on individual supports which stretch the wrinkles out of them, thus meeting the first step of applicant's claims 1 and 12. The upper part of the tank is provided with spray nozzles which produce a spray. At the same time dye is admitted into the tank, steam is admitted into tank 1 through the steam intake pipe 11. The pressure is maintained during the entire dyeing process, which for the dyeing of 16 stockings, is 6 minutes. Accordingly the second step of spraying onto a first side of the fabric is clearly disclosed. Applicant's third step of exposing to a migration and fixation process prior to drying (specifically exposing to steam and heat as claimed in claim 8) is disclosed as the steaming occurs simultaneously with the dyeing. Nylon meets the

limitation of having amine sites to react with the dye; the metal complex dye disclosed in col 3 line13 meets the limitation of a water soluble dye.

Both Brewin and Kronsbein teach the conventional method of dyeing piece goods by placing the piece on a form and spraying dye onto said piece. Neither teach a process of minimizing over-spray of said dye. Hester et al. discloses an improved apparatus for spraying a finish onto a textile piece goods, wherein the piece is held in place in expanded form (which is a functionally equivalent improvement over the forms used in both Brewin and Kronsbein) and the spraying is directed to an exact location on the garment. The process of Hester et al. includes a conveyer system wherein garments are mounted on fixtures, inflated to their fully extended, three-dimensional form, (applicant's step of removing folds from the fabric) and conveyed to a series of stations which include robot -manipulated tools, such as spray guns, which apply chemical or mechanical finishes to the garments. See abstract and figure 1. When the garments are stretched to their natural "full" position wrinkles will be eliminated. The robots are controlled by a microprocessor. A spray nozzle is placed in the hand of the robot, and the amount and position of the spray is controlled by the microprocessor. In Figure ! the robot 76 which is controlled by the microprocessor directs the spray of treatment solution precisely onto the garment minimizing over-spray of the treatment solution. While Hester's working embodiment in col 3 discloses the application of a bleaching agent to a garment, he suggests that the process may be used for dyeing (col 5 line 1), and that the garment may then be conveyed to other stations for other finishing steps (col 3 lines 43-47). It would have been obvious to the skilled artisan to

modify the processes of either Kronsbein or Brewin by including a robot controlled by a microprocessor to direct the dye where needed because Hester teaches at column 2 under "Summary of the Invention" that their process is an improvement over the conventional manner of spray dyeing garments individually, and accordingly the replacement of the spraying component of either Kronsbein or Brewin by the robot of Hester et al. would result in an improved process of applying dyes to the textiles dyed by the process of Brewin or Kronsbein.

Response to Arguments

Applicant's arguments filed 6/20/2005 regarding the above rejection have been fully considered but they are not persuasive. Applicant states that Hester is not combinable with Brewin and Kronsbein because Hester limits the modification of the garment by to specific locations on the garment and that he applies softening agents to the entire garment. In response to this argument, the examiner finds that that statement teaches that the microprocessor has the capability of delivering the treatment agent is a controlled manner, wherein the selected area of application may be to the entire garment, as evidenced by the fact that softening agents are applied to the entire garment.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, all of the references are directed to the dyeing and chemical treatment of garments in a spraying process. The motivation to combine the references appears in Hester who teaches at column 2 under "Summary of the Invention" that their process is an improvement over the conventional manner of spray dyeing garments. Applicant also states that Hester applies softening agents to the entire garment and does not suggest spray dyeing the entire garments. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Hester need not teach a method of spray dyeing the entire garment because that feature is taught by both Brewin and Kronsbein.

Applicant further states that one would not look at the process of Hester to improve the bulk dyeing of the primary references. This office respectfully disagrees with that statement since Hester himself states that his process is an automated process adapted to improve the finishing or garments individually and that it can be used for finishing the entire garment, rather than just selected areas of the garment. See col 2 lines 55-56. Applicant states that Brewin and Kronsbein do not disclose the need for a migration process because the recirculation of the spray minimizes the need for migration. However, in those two processes the dyes do migrate since in applicant's process and in the process of those two references both sides of the fabric are dyed.

The step that applicant claims as dye migration is a steaming step. In Brewin, there is a steam fixation step since the atmosphere in the dyeing chamber is superatmospheric pressure at the boiling point which is an equivalent to a dye fixation step. Brewin states that steam is circulated through a closed coil to prevent dilution of the treating solution by outside steam. Accordingly, Brewin fixes by a method he considers superior to steam fixation. See col 3 lines 37-44. Applicant's third step of exposing to a migration and fixation process prior to drying (specifically exposing to steam and heat as claimed in claim 8) is disclosed in Kronsbein as the steaming occurs simultaneously with the dyeing, and it is a time saving expedient to perform simultaneously two steps that can be performed sequentially.

Claims 22- 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brewin et al., US 2,990,087 or Kronsbein et al., US 2,985,502 in view of Hester et al. US 5,458,265 Further in view of Schaub, Us 4,659,333. Brewin or Kronsbein in view of Hester is applied s set forth in the above rejection. The combination does not teach the process steps of fixing the dye with steam after dyeing, and washing the unfixed dye from the garment after steaming. Schaub is applied as teaching that steam fixation of dyes is one of the best known and commonest methods of dye fixation on dyed or printed goods. See Col 1 lines 8 and 9. He further shows that unfixed dyes are washed off after dyeing and steam fixation. See example 9 in col 13 lines 54-56 and example 10 in column 14 lines 18-20. It would have been obvious to one having skill in the art at the time the invention was made to fix the dye sprayed onto the garments in a spray dyeing process of Brewin or Kronsbein as modified by the microprocessor of Hester by

steam and then wash off the unfixed dye because Schaub states that steam fixation is the commonest way to fix dyes and prints (note prints are an analogous dye coating process to applicant's process) and his examples disclose that the unfixed dyes are washed off after steaming.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 22-25 and 28-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Where in the specification is the basis for the limitation, "after said substantially even coat of said dye is applied to said first side but prior to said dye drying...? .

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret Einsmann whose telephone number is 571-272-1314. The examiner can normally be reached on 7:00 AM -4:30 PM M-W and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Margaret Einsmann 8/12/05

Margaret Einsmann
Primary Examiner
Art Unit 1751